FUSION 672 - VIDEO BATTEN

OVERVIEW

The Fusion 672 Video Batten is a medium resolution video product. This 15mm pitch unit features tri-colour, surface mount LEDs, offers an ultra wide viewing angle and forms part of an entirely programmable system offering the user flexibility, adaptability and visual punch.

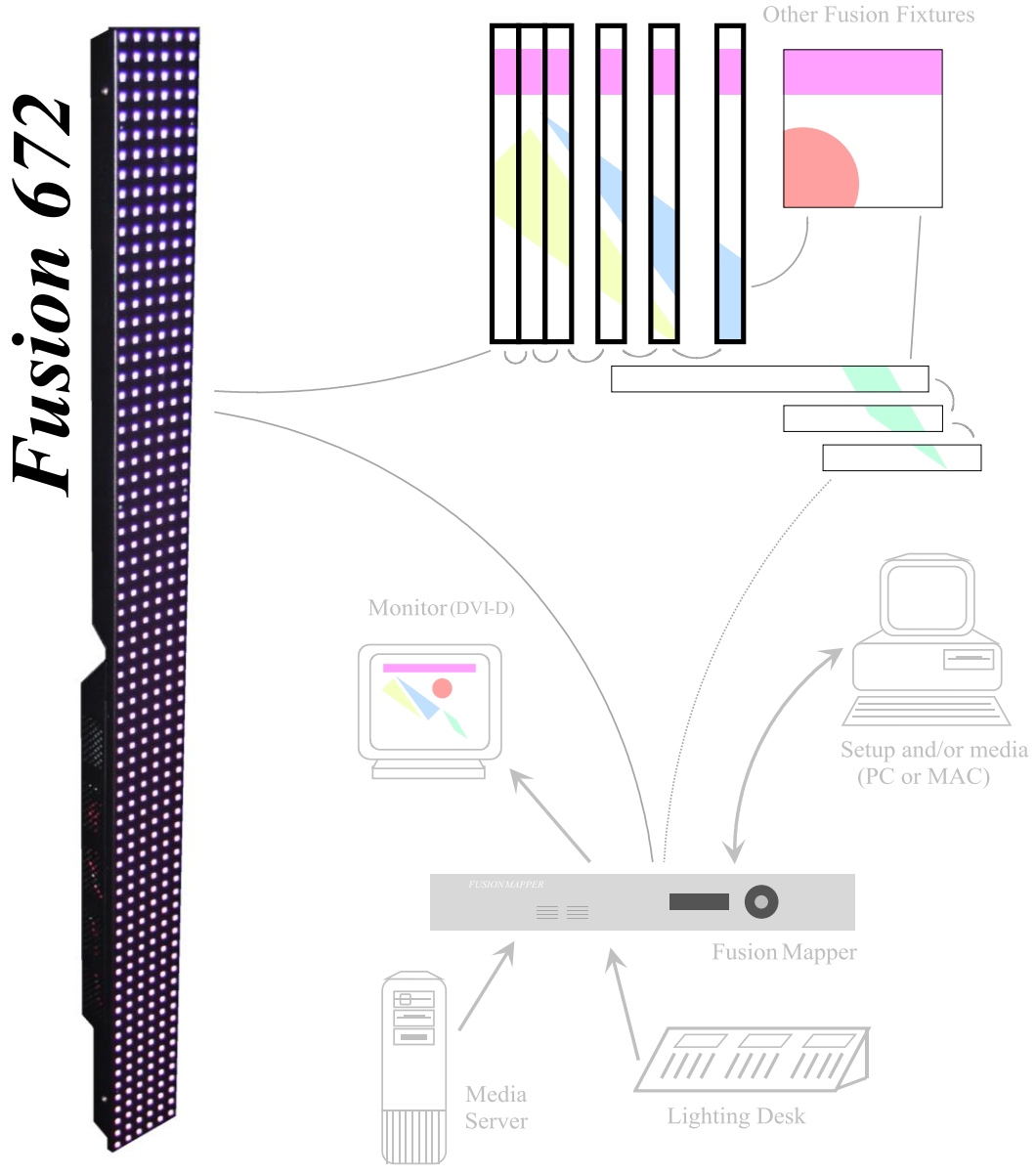

FIGURE 1: A TYPICAL FUSION SYSTEM FEATURING A FUSION 672 VIDEO BATTEN

QUICK START GUIDE

A Fusion system can be assembled quickly, easily and can be up and running in a matter of minutes. The diagram in the Overview shows all possible configurations on a single diagram. This Quick Start Guide will help you identify which components you require and guide you through the setup process.

1. Mount your Fusion Fixtures. Refer to the Mounting section for details on mounting points, available brackets and safety points.
2. Connect data to the fixtures by creating a daisy chain including all fixtures. Refer to Data Cabling for further details. Connect the first Fusion fixture to the V-NET 0 (MAIN) connection on the Fusion Mapper.
3. Connect power to all the fixtures. Power can also be daisy chained. However, there is a limit to how many units can be connected in a single chain and depends on the fixtures used. Refer to the Power Cabling section for details of how many units can be connected in a single power chain.
4. Having connected power to the Fusion Mapper turn Autonumbering ON.

DMX OPERATION

For Art-net operation goto step 8. For full video operation goto step 11.

5. Connect the lighting desk or other DMX source to the DMX-1 IN port on the rear of the Fusion Mapper.
6. On the Fusion Mapper set the input source to ArtDmx and configure the Fusion 672 Video Battens via the fixture patching menu.
7. When you are happy with the setup turn Autonumbering OFF. You are now ready to go. All configured fixtures can now be controlled directly from the lighting desk.

ART-NET OPERATION

8. Art-net operation requires the Fusion Mapper to be connected to a network via its NETWORK port. Configure the IP address and subnet mask to ensure the Fusion Mapper is properly connected to the network.
9. On the Fusion Mapper set the input source to ArtDmx and configure the Fusion 672 Video Battens via the fixture patching menu.
10. When you are happy with the setup turn Autonumbering OFF. You are now ready to go. All configured fixtures can now be controlled directly from the lighting desk.

Full Video Operation

11. Connect a DVI-D monitor to the Fusion Mapper along with a media server or other video source.
12. On the Fusion Mapper set the input source to DVI or VGA as appropriate to the video source. Adjust the crop area so that it envelops the area of the video to be displayed on the Fusion fixtures and configure the Fusion fixtures via the fixture patching menu.
13. When you are happy with the setup turn Autonumbering OFF. You are now ready to go. All configured fixtures will display the appropriate portion of the video feed.

Troubleshooting

No output on Fusion Fixtures:

- On the Fusion Mapper, check fixture blackout is OFF
- Check that each Fusion Fixture is mapped to a location within the crop area
- Check the video input to the Fusion Mapper and the input settings
- Check the power and input fuses
- Check indicators are illuminated on Fusion Fixtures and that no error is indicated

No communication between Fusion Mapper and Fusion Fixtures

- Ensure connections between any two points in the system are connected directly using cat5e cable
- Ensure no hubs, switches or routers are use when connecting Fusion Fixtures together. All fixtures must be connected directly to the next fixture or Fusion Mapper

No communication between Fusion Mapper and configuration computer of Art-net source:

- Check network connection and IP addresses of both Fusion Mapper and computer
- If the Fusion Mapper is connected directly to a computer ensure a crossover cable is used
- Check firewall settings on computer ensuring port 6455 is open

CONTENTS

History page....1
Overview....1
Quick Start Guide....2
DMX Operation....2
Art-net Operation....2
Full Video Operation....3
Troubleshooting....3
Mounting....5
Safety wire....5
Orientation....5
Data Cabling....6
Standby Connection....6
Power Cabling....6
Specification....7
Physical....7
Connections....7
Environmental....7
Electrical....7
Optical....7
Safety....7
Appendix A: Art-net and DMX modes....1

Figure 1: A Typical Fusion System Featuring a Fusion 672 Video Batten....1
Figure 2: Fusion 672 Orientation....5

MOUNTING

Each batten is supplied with two 'Top-Hat' brackets. These attach to the rear panel top and bottom mounting points. Each bracket can be attached to the batten using the supplied quick release quarter turn fixings. Alternatively, two M5 bolts per bracket can be used for custom fittings and permanent installations.

SAFETY WIRE

Any batten that is mounted above the ground should employ a safety wire through the eyelet located on the rear panel. This safety wire and any related cleat should be rated to at least 15kg.

***Important**: If a fixture experiences a fall that is arrested by the safety wire, the batten should be returned to the point of purchase for inspection*

ORIENTATION

The Fusion 672 Video Batten can be mounted in one of four orientations. These are referred to as 0°, 90°, 180° & 270°. Located on the back of the unit is a compass which indicates which ay up a particular fixture is mounted.

When configuring a Fusion 672 batten for use in video mode this orientation is required. Along with the position of the batten in the video space, the orientation is required. This ensures that the video content specific to each batten is displayed the right way around.

Note: The orientation of the Fusion 672 batten is not relevant when used in either Art-net or DMX modes.

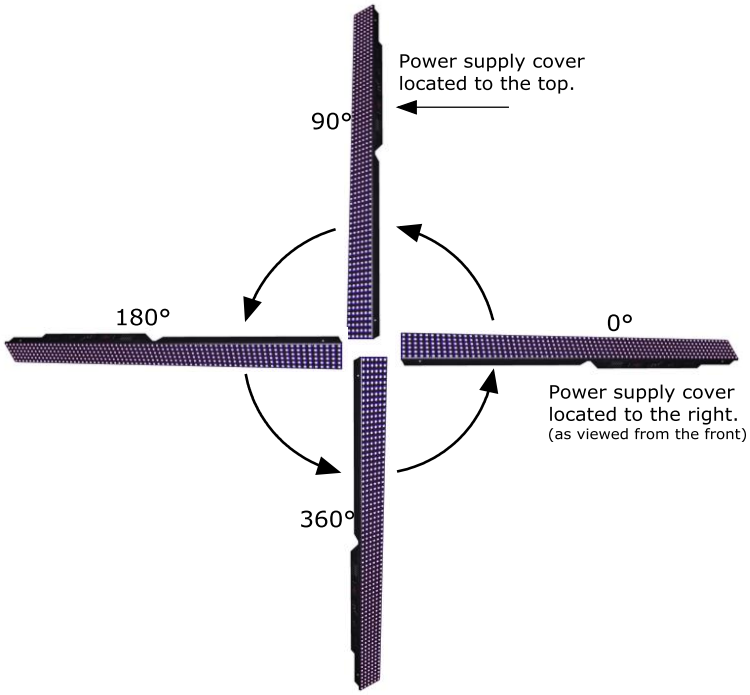

FIGURE 2: FUSION 672 ORIENTATION

DATA CABLING

Fusion systems employ standard Cat 5e or Cat 6 network cable terminated with RJ45 connectors. For higher security Neutrik EtherCon® shells (NE8MC) should be used. These attach around standard cables already terminated with RJ45 connectors.

The maximum length of each data cable is 100 meters. There is no minimum length.

***Important**: Fusion 672 battens will **not** work if any data connection in the system is connected through a standard network hub, switch or router.*

1) Connect the data feed from the Fusion Mapper 'V PORT 0' connector to port A on the first Fusion 672 batten.

2) Daisy-chain all the battens in the system. Connect port B to port A on the next batten, and so on.

3) Connect port B on the last batten back to the Fusion Mapper. Note: this connection is optional. See the Standby Connection section below.

STANDBY CONNECTION

Connect port B from the last batten back to the Fusion Mapper V PORT 1 connector. This protects the system against cable faults. In the event of a cable failing this protection link ensures the system continues to function without the loss of any part of the display image.

POWER CABLING

Power is fed to each Fusion 672 fixture using industry standard Neutrik PowerCon connectors (NAC3FCA and NAC3FCB). Battens can be daisy-chained providing no more than 20 units per feed are connected together.

CONFIGURATION

Fusion 672 Video Battens must be used in a system with a Fusion mapper. It is from this unit that the system is controlled and configured. Whether the Fusion 672's are to be used in DMX, Art-net or video modes is all specified from the Fusion Mapper.

For full details on how to setup and control the Fusion 672 batten from the Fusion Mapper refer to the Fusion Mapper User Manual. See Illieum.com and look for Fusion Extras.

Specification

Physical

Length:	1080mm
Width:	90mm
Maximum depth:	60.2mm
Weight:	3.3kg

Connections

AC power In:	Neutrik PowerCon®
AC power Out:	Neutrik PowerCon®
Data:	2 x Neutrik EtherCon®

Environmental

Max. ambient temperature:	40°C
IP rating:	IP44

Electrical

Input voltage:	90 to 264V AC, 47 to 63Hz
Power consumption:	100W (max.)
Fuse size:	20 x 5mm
Fuse rating:	3.15A (slow) 250VAC

Optical

Min. luminous intensity:	910mcd/pixel (full white)
Colour processing:	16-bit
Viewing angle:	165°

Safety

EU: EN60950-1
2006/95/EC – The Low Voltage Directive
2004/108/EC – The EMC Directive

APPENDIX A: ART-NET AND DMX MODES

Chan.	0:36RGB	1:36RGB+I	2:18RGB	3:18RGB+I	4:12RGB	5:12RGB+I	6:9RGB	7:9RGB+I	8:6RGB	9:6RGB+I	10:3RGB	11:3RGB+I	12:6FX+I	13:3RGB6FXI	14:36RGB6FXI
1	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red (cell 1)	Red	Red	C1 Effect	Red	Red (cell 1)
2	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn. (cell 1)	Grn.	Grn.	C1 Speed	Grn.	Grn. (cell 1)
3	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue (cell 1)	Blue	Blue	C1 Xfade	Blue	Blue (cell 1)
4	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	Red (cell 2)	-	Master int.	C2 Effect	C1 Effect	Red (cell 2)
5	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	Grn. (cell 2)	-	-	C2 Speed	C1 Speed	Grn. (cell 2)
6	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	Blue (cell 2)	-	-	C2 Xfade	C1 Xfade	Blue (cell 2)
7	Red (cell 3)	Red (cell 3)	Red (cell 3)	Red (cell 3)	Red (cell 3)	Red (cell 3)	Red (cell 3)	Red (cell 3)	-	Master int.	-	-	Master int.	C2 Effect	Red (cell 3)
8	Grn. (cell 3)	Grn. (cell 3)	Grn. (cell 3)	Grn. (cell 3)	Grn. (cell 3)	Grn. (cell 3)	Grn. (cell 3)	Grn. (cell 3)	-	-	-	-	-	C2 Speed	Grn. (cell 3)
9	Blue (cell 3)	Blue (cell 3)	Blue (cell 3)	Blue (cell 3)	Blue (cell 3)	Blue (cell 3)	Blue (cell 3)	Blue (cell 3)	-	-	-	-	-	C2 Xfade	Blue (cell 3)
10	Red (cell 4)	Red (cell 4)	Red (cell 4)	Red (cell 4)	Red (cell 4)	Red (cell 4)	-	Master int.	-	-	-	-	-	Master int.	Red (cell 4)
11	Grn. (cell 4)	Grn. (cell 4)	Grn. (cell 4)	Grn. (cell 4)	Grn. (cell 4)	Grn. (cell 4)	-	-	-	-	-	-	-	-	Grn. (cell 4)
12	Blue (cell 4)	Blue (cell 4)	Blue (cell 4)	Blue (cell 4)	Blue (cell 4)	Blue (cell 4)	-	-	-	-	-	-	-	-	Blue (cell 4)
13	Red (cell 5)	Red (cell 5)	Red (cell 5)	Red (cell 5)	-	Master int.	-	-	-	-	-	-	-	-	Red (cell 5)
14	Grn. (cell 5)	Grn. (cell 5)	Grn. (cell 5)	Grn. (cell 5)	-	-	-	-	-	-	-	-	-	-	Grn. (cell 5)
15	Blue (cell 5)	Blue (cell 5)	Blue (cell 5)	Blue (cell 5)	-	-	-	-	-	-	-	-	-	-	Blue (cell 5)
16	Red (cell 6)	Red (cell 6)	Red (cell 6)	Red (cell 6)	-	-	-	-	-	-	-	-	-	-	Red (cell 6)
17	Grn. (cell 6)	Grn. (cell 6)	Grn. (cell 6)	Grn. (cell 6)	-	-	-	-	-	-	-	-	-	-	Grn. (cell 6)
18	Blue (cell 6)	Blue (cell 6)	Blue (cell 6)	Blue (cell 6)	-	-	-	-	-	-	-	-	-	-	Blue (cell 6)
19	Red (cell 7)	Red (cell 7)	-	Master int.	-	-	-	-	-	-	-	-	-	-	Red (cell 7)
20	Grn. (cell 7)	Grn. (cell 7)	-	-	-	-	-	-	-	-	-	-	-	-	Grn. (cell 7)
21	Blue (cell 7)	Blue (cell 7)	-	-	-	-	-	-	-	-	-	-	-	-	Blue (cell 7)
22	Red (cell 8)	Red (cell 8)	-	-	-	-	-	-	-	-	-	-	-	-	Red (cell 8)
23	Grn. (cell 8)	Grn. (cell 8)	-	-	-	-	-	-	-	-	-	-	-	-	Grn. (cell 8)
24	Blue (cell 8)	Blue (cell 8)	-	-	-	-	-	-	-	-	-	-	-	-	Blue (cell 8)
25	Red (cell 9)	Red (cell 9)	-	-	-	-	-	-	-	-	-	-	-	-	Red (cell 9)
26	Grn. (cell 9)	Grn. (cell 9)	-	-	-	-	-	-	-	-	-	-	-	-	Grn. (cell 9)
27	Blue (cell 9)	Blue (cell 9)	-	-	-	-	-	-	-	-	-	-	-	-	Blue (cell 9)
28	Red (cell 10)	Red (cell 10)	-	-	-	-	-	-	-	-	-	-	-	-	Red (cell 10)
29	Grn. (cell 10)	Grn. (cell 10)	-	-	-	-	-	-	-	-	-	-	-	-	Grn. (cell 10)
30	Blue (cell 10)	Blue (cell 10)	-	-	-	-	-	-	-	-	-	-	-	-	Blue (cell 10)
31	Red (cell 11)	Red (cell 11)	-	-	-	-	-	-	-	-	-	-	-	-	Red (cell 11)
32	Grn. (cell 11)	Grn. (cell 11)	-	-	-	-	-	-	-	-	-	-	-	-	Grn. (cell 11)
33	Blue (cell 11)	Blue (cell 11)	-	-	-	-	-	-	-	-	-	-	-	-	Blue (cell 11)
34	Red (cell 12)	Red (cell 12)	-	-	-	-	-	-	-	-	-	-	-	-	Red (cell 12)
35	Grn. (cell 12)	Grn. (cell 12)	-	-	-	-	-	-	-	-	-	-	-	-	Grn. (cell 12)
36	Blue (cell 12)	Blue (cell 12)	-	-	-	-	-	-	-	-	-	-	-	-	Blue (cell 12)
37	-	Master int.	-	-	-	-	-	-	-	-	-	-	-	-	C1 Effect
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C1 Speed
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C1 Xfade
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C2 Effect
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C2 Speed
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C2 Xfade
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Master int.